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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,563	01/23/2001	Young-il Lim	A33875	2450

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NEW YORK, NY 10112

EXAMINER

MEHRPOUR, NAGHMEH

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 02/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/767,563

Applicant(s)

LIM ET AL.

Examiner

Naghmeh Mehrpour

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 11 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-2, 4**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (US Patent Number 6,405,045).

Regarding **claim 1**, Choi teaches a method for controlling an overload of a digital mobile communication system (see figure 1) having a base transceiver station (BTS) and a base station controller (BSC), wherein each of the base transceiver station and the base station controller has a database (Col 1 lines 30-50, col 2 lines 26-34), the method comprising the step of:

a) initializing threshold values stored on the database as predetermined values

(see figure 1, col 3 lines 22-37, lines 40-43, lines 54-58, col 4 lines 12-15).

b) monitoring each of utility rates of a control processor resource (col 4 lines 16-21) and a call resource (col 3 lines 44-51, lines 59-66, col 5 lines 59-61),

c) comparing the utility rates of the control processor resource and the call resource with the threshold values respectively, thereby obtaining overload of the control processor resource and the call resource (col 4 lines 15-21),

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d) comparing over load of the control processor resource with the overload of the call resource, thereby selecting one of the control processor resource and the call resource as a resource to be controlled, which has a higher overload grade (col 4 lines 15-21, col 22-52)

e) determining whether an overload occurs in the resource to be controlled (col 4 lines 22-28).

f) if the overload occurs in the resource to be controlled, informing a base station manager of an occurrence in the resource to be controlled (col 4 lines 53-57).

Choi teaches that comparing between the calls sources and control sources loads are based on the utility rate (col 4 lines 15-19). Choi teaches that the comparison and detection based on predetermined threshold level (col 4 lines 19-21). Choi does not specifically mention that system measure the overload grade. However It is well known in the art that overload grade is obtained by comparing the utility rate with the overload threshold value as applicant mentioned on specification page 5 lines 10-11. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine above teaching with Choi system, in order to provide a dynamic overload control device and overload of the resource use rate and processor overload in BTS and BSC of a CDMA system.

Regarding **claim 2**, Choi teaches a method further comprising the step of: changing the overload threshold values according to a control signal from the base station manager (col 4 lines 53-57).

Regarding **claim 4**, Choi teaches a method as wherein, at step f) an overload utility rate of a previous period and information about the overload of the current overload grade are transmitted

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to the base station manager along with the occurrence of the overload (col 4 lines 16-52). Choi fails to specifically mention that the method calculates an overload grade. System measures the load grade. Since overload grade is obtained by comparing the utility rate with the overload threshold value. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine above teaching with Choi system, in order to provide a dynamic overload control device and overload of the resource use rate and processor overload in BTS and BSC of a CDMA system.

3. **Claim 3**, is rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (US Patent Number 6,405,045) in view of Park et al. (US Patent Number 5,835,490).

Regarding **claim 3**, Choi fails to teach a method wherein the overload a major grade includes a normal grade, a minor grade, a major grade and a critical grade. However Park teaches that the threshold value can be set to the normal, minimum, maximum, critical levels (col 4 lines 52-55, col 6 lines 15-20). Since both Park and Choi both teach method of controlling overload in the same type of environment. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Park teaching with Choi system, in order to improve load balance of user efficiently, and maximizes the use of system resources.

Response to Arguments

4. Applicant's arguments filed 11/14/03 have been fully considered but they are not persuasive.

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In response to applicant's argument that Choi compares the utility rate of each resource to a corresponding set of thresholds, and control incoming and outgoing calls according to the corresponding overload state of the incoming and outgoing calls, but Choi does not compare the grade thereby obtained to each other in order to select a resource to be controlled, and there is no suggestion to control overload according to the overload grade of the control processor resource or to control overload by control of the control processor resource.

As the applicant's mentioned Choi does compares the utility rate of each resource to a corresponding set of threshold. Examiner explains in the below following that how Choi determines the over load grade for a control processor and a call resources and then reach to the same result by comparing the grades. In figure 2, a drive unit 20 obtains the thresholds at each point and stores them in a database 10; it allocates an overload control process based upon the thresholds at each point and starts the overload control process. If the overload control process is started, overload detect unit 30 periodically detects a BCP activity ratio, BTS call resource occupancy rate, BCCP activity ratio, and BSC call resource occupancy rate, and selectively compares the detected value with the thresholds from drive unit 20 before determining the overload.

A overload detect unit 30, which periodically checks an overload and detects a value used for determining the overload compares an overload detect value Y1 with the handoff request call rejection point from the drive unit 20 in the first place. If overload detect value Y1 exceeds the handoff request call rejection point, overload detect unit 30 concludes the overload. If overload

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detect value Y1 is below the handoff request call rejection point, overload detect unit 30 compares overload detect value Y1 with the incoming and outgoing call rejection point. After concluding the overload through the comparison processes, overload detect unit 30 informs overload process unit 40 at which point the overload occurred. Overload process unit 40 performs an overload control process on the overload at the point notified.

If overload process unit 40 detects the overload in the handoff request call, it rejects the allocation for all call requests. Since the overload occurs when there is an incoming or outgoing call request in this case, the incoming or out-going call is rejected. Since the overload also occurs when there is an out-going call request in this case, the out-going call is rejected. Simultaneously, overload process unit 40 informs an operator and adjacent systems, such as MSC, BSC, and BTS, that the relevant system is near to the overload. (Let the operator know that the control.

If overload process unit 40 detects the overload in the handoff request call, it rejects the allocation for all call requests. Since the overload occurs when there is an incoming or outgoing call request in this case, the incoming or out-going call is rejected. Since the overload also occurs when there is an out-going call request in this case, the out-going call is rejected. Simultaneously, overload process unit 40 informs an operator and adjacent systems, such as MSC, BSC, and BTS, that the relevant is near to the overload. If overload process unit 40 detects an incoming and outgoing call overload, since the overload occurs when there is an incoming or out-going call request, incoming or out-going call is rejected. Simultaneously,

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overload process unit 40 informs an operator and adjacent systems, such as MSC, BSC, and BTS, that the relevant system is near to the overload (ST10-ST12). (If overload process unit 40 detects an out-going call overload, an out-going call is rejected when there is an outgoing call request. Simultaneously, overload process unit 40 informs an operator and adjacent systems, such as MSC, BSC, and BTS, that the relevant system is near to the overload (ST11-ST12).

If overload process unit 40 detects an overload warning point, it informs an operator and adjacent systems, such as MSC, BSC, and BTS, that the relevant system is near to the overload (ST12). In the above Choi explains how the system determines the different possibility of the overload in the control processor).

After processing the overloads at each point, overload process unit 40 takes statistics of the overloads at each point (ST13), and checks whether the overload occurs in its own system or not (ST14). If the overload is not from its own system, therefore the over load is from the call resource. If the overload is from its own system, overload process unit 40 informs the adjacent systems of the overload is from the control processor (ST15) (col 5 lines 17-23). Therefore, Choi does compare the grades in order to select a resource to be controlled. The incoming and outgoing calls shows that the overloads are in the control processor, other wise the overload will be on in the call resources, the fact that applicant has mentioned the comparing of the control processor grade with the call resource grade, and Choi discloses the processes of calculating the comparison of the grades of control processor and call resources to reach to the same conclusion, which would flow naturally from the above following the suggestion of the

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applicant cannot be the basis for patentability when the differences would otherwise be obvious.

See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. **Any responses to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Or:

(703) 308-6306, (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, Va., sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Melody Mehrpour whose telephone number is (703) 308-7159. The examiner can normally be reached on Monday through Thursday (first week of bi-week) and Monday through Friday (second week of bi-week) from 6:30 a.m. to 5:00 p.m.

NM

Feb 10, 2004

Marsha D Banks-Harold
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